	Case 2:03-cv-02526-MJP Document 250	Filed 04/12/05 Page 1 of 14
1		
2		
3		
4		
5		
6		
7		
8	UNITED STATES DISTRICT COURT WESTERN DISTRICT OF WASHINGTON AT SEATTLE	
9		
10	TRAVIS INDUSTRIES, INC.,	
11	Plaintiff,	
12 13	v.	No. C03-2526P
14	HEARTH & HOME TECHNOLOGIES, INC., et	ORDER GRANTING PLAINTIFF'S MOTION FOR SUMMARY
15	al.,	JUDGMENT OF NON- INFRINGEMENT
16	Defendants.	
17		
18		
19	Summary Judgment of Non-infringement of U.S. Patent No. 4,766,876. Having reviewed the	
20		
21		
22		
23		
24	judgment is also warranted for the independent reason that Travis' accused products do not infringe	
25		
	ORDER - 1	

the rear wall air supply requirements in claims 1 and 20. In light of this holding, the Court need not address the merits of Travis' argument regarding the air supply requirements in claim 21.

<sup>1</sup> The Court uses the words "gas" and "smoke" interchangeably.

ORDER - 2

# BACKGROUND

The '876 patent concerns a wood stove design that minimizes emission releases from a natural wood burning fire through a process of secondary combustion. In this invention, a firebox is mounted on a pedestal. Primary combustion occurs when fuel, e.g. wood, is placed in the firebox and burned. Primary combustion releases gas emissions, including unburned hydrocarbon gases, that rise towards the top of the fire box. A baffle stops the gas or smoke from exiting the firebox. The hydrocarbon gas emissions from the primary combustion, mixed with heat and air, is then burned under the baffle. This is the secondary combustion. The gas or smoke<sup>1</sup> from this secondary combustion flows around the baffle, eventually making its way toward an exhaust flue in the rear top of the firebox where it exits the firebox.

Hearth asserts that thirteen of Travis' products infringe the '876 patent. Because some of the accused products are similar, there are seven logical groupings, named as follows: 1) Lopi Answer and Lopi Patriot, 2) Avalon Rainer 45 and Avalon Rainer 90, 3) Avalon Mission and Avalon Cottage, 4) Lopi Sheffield, 5) Lopi Liberty, Lopi Freedom Bay, and Avalon Olympic, 6) Lopi Freedom, and 7) Lopi Endeavor and Lopi Revere.

Travis moves for summary judgment that none of these products infringe the '876 patent either literally or under the doctrine of equivalents. Travis focuses its argument on the baffle configuration and the various air supplies claimed in the '876 patent.

#### **ANALYSIS**

Patent infringement analysis involves two steps. First, the court must construe the asserted claim terms as a matter of law. Second, the court must compare the properly construed claim terms to

2

3 4

5

6

7

8 9

10

11

12 13

14

15

16

17 18

19

20

21 22

23

24

25

the accused product. This Court has already construed some of the asserted claim terms for the '876 patent. (Order on Claim Construction (Dkt. No. 74)).

An accused device may infringe a patent either literally or under the doctrine of equivalents. Infringement, whether literally or under the doctrine of equivalents, is a question of fact. Summary judgment is warranted under Fed. R. Civ. P. 56(c) when there is no genuine issue of material fact and the moving party is entitled to judgment as a matter of law. "[A] trial court may determine infringement on summary judgment only when no reasonable jury could find that every limitation recited in the properly construed claim either is or is not found in the accused device." Frank's Casing Crew & Rental Tools, Inc. v. Weatherford Intern., Inc., 389 F.3d 1370, 1376 (Fed. Cir. 2004) (quotation and citation omitted). Summary judgment of non-infringement is appropriate "if a claim limitation is totally missing from the accused device." London, 946 F.2d at 1539.

An accused product literally infringes a claim if every limitation in the claim is found in the accused product. If a single claim limitation is missing, there is no literal infringement. Engel <u>Industries</u>, Inc. v. Lockformer Co., 96 F.3d 1398, 1405 (Fed. Cir. 1996).

Under the doctrine of equivalents, "a product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is 'equivalence' between the elements of the accused product or process and the claimed elements of the patented invention." Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co. 520 U.S. 17, 21 (1997). Warner-Jenkins firmly established the all-elements rule, in which the accused product must contain an equivalent of each individual element (or limitation) of the claim for there to be infringement under the doctrine of equivalents. Id. at 29. The test for equivalence is whether the accused device performs substantially the same function, in substantially the same way, with substantially the same result as the protected device (known as the "function-way-result test"). <u>Id.</u> at 39-40.

Determining infringement of a § 112, ¶ 6 means-plus-function limitation requires a distinct analysis. An accused product literally infringes a means-plus-function limitation only if there is a ORDER - 3

structural equivalent in the accused product that performs the identical function claimed in the limitation. While the function must be identical, the structure to perform that function must be either identical or substantially equivalent to the corresponding structure in the patent specification. Odetics, Inc. v. Storage Tech. Corp., 185 F.3d 1259, 1267 (Fed. Cir. 1999). This analysis is somewhat similar to a doctrine of equivalents analysis, but they are not exactly the same. The "function-way-result" test is narrower in a mean-plus-function literal infringement analysis because the functions must be identical. The "way" the accused product's structure performs the function and the "result" of that performance need only be insubstantially different. Id. The comparison of structures should not be done on a component-by-component basis; the corresponding structure as a whole must be equivalent. Id. at 1268. However, even if the accused structure does not perform the identical function as in the means-plus-function limitation, it may nonetheless infringe under the doctrine of equivalents if it performs substantially the same function. Kemco Sales, Inc. v. Control Papers Co., Inc., 208 F.3d 1352, 1364 (Fed. Cir. 2000). The "way" and "result" analysis is the same for both literal infringement and the doctrine of equivalents. Id.

Hearth asserts independent claims 1, 20, and 21 and dependent claims 2, 7, 11-13, and 15-19. As outlined below, Travis' products do not infringe any of the independent claims. Consequently, they cannot infringe the dependent claims. London v. Carson Pirie Scott & Co., 946 F.2d 1534, 1539 (Fed. Cir. 1991) (if an accused product does not infringe an independent claim, it cannot infringe a claim dependent on that independent claim).

#### I. The Baffle Limitation in Claims 1, 20, and 21

All of the asserted independent claims require a baffle with heat absorbing and insulating means on top of the baffle. Claim 1 requires a "baffle having heat absorbing and insulating means thereon." (The '876 patent, 8:19-20). The Court construed this term to mean "an object placed in an appliance to change the direction or retard the flow of air, air fuel mixtures, or fuel gases, with the heat

absorbing and insulating means on top of the aforesaid object." Claims 20 and 21 both require "heat absorbing means on the baffle." (Id., 10:15, 10:55 (respectively)).

Travis' accused products do not literally infringe unless the accused products have a baffle with heat absorbing and insulating means on top of it. Likewise, Travis' accused products do not infringe under the doctrine of equivalents unless they perform substantially the same function, in substantially the same way, with substantially the same result.

The parties do not dispute the configurations of the accused products.<sup>2</sup> The accused products have various configurations where firebricks<sup>3</sup> are suspended over the lower portion of the firebox by sitting or resting on metal brackets that hold up the edge or edges of the firebricks. In the Answer and Patriot products, the firebrick is suspended by a single metal bracket at the front end of the firebrick and by the rear wall. (Atomboski Decl., Ex. C). In the Rainer 45, Rainer 90, Mission, and Cottage, the firebrick is suspended by a front and a rear metal bracket. (Id., Exs. C & G). In the Sheffield, the firebrick rests partially on a metal plate (which Travis calls a "baffle plate") that is held up by a bracket on the front end. The metal plate extends most of the way across the underside of the firebrick, but a portion of the firebrick's underside is suspended without any support between the plate and the rear wall. (Id., Ex. H). In the Endeavor and Revere, two rows of firebrick are suspended by three sets of brackets (a rear, middle, and front one), with a bypass built into the rear bracket (which can be opened to allow smoke to flow directly toward the exhaust flue). (Id., Ex. I). In the Liberty, Freedom Bay, Olympic, and Freedom, a front row of firebrick is suspended between a front metal bracket and a middle bracket, with the area between the middle bracket and the rear wall divided into left and right portions of firebrick with a metal bypass in between. (Id., Exs. E-F).

<sup>&</sup>lt;sup>2</sup> Hearth does not dispute that the documents attached to the declaration of Alan Atomboski, Travis' Director of Research and Development, accurately represent the accused products. Instead, Hearth argues that Travis' counsel have mischaracterized how Travis' stoves operate and have not provided any evidentiary support for their characterization.

<sup>&</sup>lt;sup>3</sup> The phrases "firebrick" and "heat absorbing and insulating means" are used interchangeably.

ORDER - 5

of firebrick is not the same as the baffle with heat absorbing and insulating means on top of the baffle that is claimed in the '876 patent. Travis asserts that if the firebrick were removed from the accused products, there would essentially be nothing but relatively narrow metal brackets between the lower and upper areas of the fire box. The smoke would rise directly from the area of primary combustion to the exhaust flue. By using the firebrick together with the metal brackets and plate to create a baffle, this baffle assembly creates a barrier for the rising smoke. Absent the firebrick component of the baffle assembly, there would be no such barrier.

Hearth counters that the various metal brackets (and in one product the metal plate) are baffles

According to Travis, all of its accused products have baffles that are substantially formed of

firebrick. In other words, the accused products' heat absorbing and insulating means is not on top of

the baffle but is the baffle itself or at least a substantial part of it. Travis contends that a baffle formed

Hearth counters that the various metal brackets (and in one product the metal plate) are baffles in their own right, on top of which the firebrick rests. Hearth is correct that there is nothing in the Court's construction of the claim term "baffle having heat absorbing and insulating means thereon" that requires the baffle be a single piece or that specifies exactly where the baffle must be located. Hearth points to this Court's construction of the term baffle as an object that changes the direction or retards the flow of smoke and argues that the individual metal pieces in the accused products which hold up the firebrick perform the function of a baffle because they change the direction or retard the flow of smoke when it rises and comes into contact with the metal pieces. Hearth's expert disputes the way Travis' counsel characterize the operation of the baffle configuration in the accused products. Hearth's expert asserts that even if there were no firebrick in the accused products, the metal pieces would function as a baffle because the rising smoke would hit these metal pieces and have to move around them in its upward path. The metal pieces alone would impede the flow of smoke, causing the smoke to linger for a period of time at the level of the metal pieces before rising to the exhaust flue.<sup>4</sup>

<sup>&</sup>lt;sup>4</sup> Hearth also points to a brochure for one of Travis' "Avalon" stoves as implying that the baffle is not the firebrick, but is lined with firebrick. It states "the firebox floor and walls and the

As further support, Hearth points to deposition statements by Alan Atomboski, Travis' Director of Research and Development. Mr. Atomboski stated that if there were no firebrick and just the metal pieces were present in the various accused products, a small percentage of the total rising smoke would hit the metal pieces and have to go around them. (Ex. B, at 84-85, 168-69). The front and rear brackets are sometimes referred to in Travis' illustrations of the stoves as "baffle deflectors" or "baffle angles." In deposition, Mr. Atomboski was asked what the baffle deflector does. He responded that "it's used as a baffle. . . . it's part of the whole baffle assembly, but it's a part that deflects heated air as it passes around the front of it." (Id. at 71). In short, Hearth contends that the impact on the flow of smoke as it hits these metal pieces (if there were no firebrick) is a disputed fact that precludes summary judgment.

Hearth's argument is not persuasive. Even if Hearth's contention that these individual metal pieces are "baffles" that change the direction or impede the flow of the rising smoke is true, Travis' accused products do not infringe the '876 patent either literally or under the doctrine of equivalence because these "metal baffles" do not have the same characteristics as the baffle in the '876 patent. The '876 patent makes clear that the baffle in the '876 patent separates the firebox into a lower portion where combustion occurs and an upper portion where the exhaust flue is located through which the smoke exits the firebox. Claims 1, 20, and 21 describe the baffle as dividing the interior of the firebox into a lower fuel combustion chamber below the baffle and an upper heat-exchanging and exhaust chamber above the baffle. In claims 1, 20, and 21, the baffle is mounted in such a way that there is a passageway created between the edge of the baffle and one of the walls through which the gas emissions or smoke flow from the fuel combustion chamber to the heat exchanging and exhaust chamber. (The '876 patent, 7:55-61, 10:3-11, 10:43-51). Because the '876 patent refers to a baffle

removable baffle are lined with dense clay firebrick which absorbs heat then radiates it back into the stove and elevates internal temperatures and promotes an environment for secondary combustion to occur." (Zueli Decl., Ex. C).

with heat absorbing and insulating means on top of the baffle, it is clear that the baffle that separates

the fire box into two chambers is independent of there being heat absorbing and insulating means on

top of the baffle. In other words, even without the heat absorbing and insulating means, the baffle

must separate the firebox into a lower combustion chamber and an upper heat-exchanging and exhaust

chamber with a passageway between an edge of the baffle and a wall of the firebox through which the

change the direction or impede the flow of the gas emissions, these metal pieces do not separate the

firebox into a lower fuel combustion chamber and an upper heat-exchanging and exhaust chamber.

Because these metal pieces are relatively narrow in depth compared to the depth of the interior of the

firebox, they do not create a division between the two chambers with a passageway between one edge

of the piece and a wall. Without the firebrick, these metal pieces do not direct the flow of the gas

emissions in any particular direction. In his deposition, Mr. Atomboski made clear that the metal

pieces alone would change the direction of the rising smoke, but that if there were no firebrick, the

photographs taken by Hearth's expert. In short, without the firebrick, there would be no "baffle" in

the sense that the term is used in the '876 patent. Not only does the baffle configuration in the

accused products not literally infringe, but they do not infringe under the doctrine of equivalents

because they do not perform the same function in the same way with the same result as the claimed

baffle. Therefore, no reasonable jury could find that the claim limitations regarding baffles are met by

smoke would flow in all different directions. (Ex. B, at 84-85). This is also apparent in the

Even if the individual metal pieces in the accused products are "baffles" to the extent that they

smoke rises from the lower to the upper chamber.

2 3 4

1

67

5

9

10

8

11 12

13

14

16

15

17 18

19

20

21

22

II. Back Wall Air Supplies

any of the accused products.

2324

independent reason that its accused products do not have the various rear wall openings or inlets that

Summary judgment of non-infringement of claims 1 and 20 is also warranted for the

25

ORDER - 8

are required in claims 1 and 20 of the '876 patent and therefore the accused products do not infringe literally or under the doctrine of equivalents.

# A. Claim 1

Claim 1 requires "a first air supply means having an opening in the rear wall for permitting the flow of air into the fuel combustion chamber to impinge the fuel from the rear to support primary combustion of the fuel . . . . " (The '876 patent, 7:65-68). The parties dispute whether this is a meansplus-function claim. See Envirco Corp. v. Clestra Cleanroom, Inc., 209 F.3d 1360, 1364 (Fed. Cir. 2000) ("If a claim element contains the word 'means' and recites a function, this court presumes that element is a means-plus-function element under § 112, ¶ 6. . . . That presumption falls, however, if the claim itself recites sufficient structure to perform the claimed function."). Regardless of whether it is a means-plus-function claim or not, the claim language requires an opening in the rear wall that permits air to flow into the fuel combustion chamber "to impinge the fuel from the rear" to support primary combustion. "Impinge" is defined as "to collide or strike." (Rossman Decl., Ex. 4 (The American Heritage College Dictionary, 3d ed.)).

Travis asserts that its accused products do not literally infringe this claim limitation because none of the products have a rear wall opening through which air flows into the chamber and impinges the fuel from the rear. The Endeavor and Revere are the only two accused products that have openings in the rear wall. These openings, however, are located immediately below the baffle and support secondary combustion. They direct the air forward, not downward. Consequently, they do not permit air to flow into the chamber to impinge the fuel to support primary combustion. In its response, Hearth does not assert that the accused products literally infringe this claim limitation. Therefore, Travis' accused products do not literally infringe claim 1 of the '876 patent.

Hearth asserts that it is a disputed fact whether the front wall openings in the accused products are substantially equivalent to the rear wall opening claimed in claim 1. As support, Hearth points to its expert's report and to deposition testimony of Travis' Director of Research and Development Alan ORDER - 9

Atomboski. According to Hearth's expert, there is no substantial difference whether the air enters from the front or from the rear because in both instances the air impinges the fuel and supports primary combustion. He maintains that the front opening in the accused products performs the same function of permitting the flow of air into the fuel chamber, impinging the fuel, and supporting primary combustion, and that the front opening and the rear opening perform this function in substantially the same way since both use openings in a wall to permit air to flow into the chamber and impinge the fuel. (Gibbons Decl., ¶ 27).

Travis counters that none of its accused products infringe this claim limitation under the doctrine of equivalents because an opening in the front cannot be substantially equivalent to an opening in the rear. Front is opposite of rear. According to Travis, the rear opening is a structural limitation of the claim that would be vitiated if a front opening could be deemed substantially equivalent to a rear opening that impinges the fuel from the rear. Further, contrary to Hearth's assertion, Mr. Atomboski did not state that there is no substantial difference whether air enters from the front or back. Rather, he stated that some of the primary air that enters from the front moves toward the back of the chamber and burns the fuel from the rear.

The Court agrees with Travis. Claim 1 specifies that the air entering from the rear impinges the fuel from the rear. This claim language cannot be ignored. Because the patentee chose to use the word rear in describing the opening and the direction from which the air impinges the fuel, the patentee cannot use the doctrine of equivalents to expand the claim beyond the limitations he expressly included in the claim language. Notably, the claim does not merely require that the opening in the rear wall permit the flow of air into the fuel combustion chamber to impinge the fuel to support primary combustion of the fuel; the claim explicitly requires that the air inlet permit the air to impinge the fuel from the rear. The fact that some of the air that enters through the front opening makes its way towards the back of the fuel combustion chamber and burns the fuel from the back does not save Hearth's argument. Air circulating once it is inside the fuel combustion chamber cannot be said to be

1 2 3

substantially equivalent to air that is purposefully directed to enter the chamber from a certain location. In short, no reasonable jury could find that the front opening to permit air into the chamber for primary combustion is substantially equivalent to this claim limitation.

B. Claim 20

Claim 20 requires a "combustion air supply means for supplying combustion air to the fuel combustion chamber below the heat absorbing means . . . . " (The '876 patent, 10:20-22). This is a means-plus-function claim term under § 112, ¶ 6 of the Patent Act. The Court construed the function as "supplying combustion air to the fuel combustion chamber." The corresponding structure must supply air for both primary combustion and secondary combustion. The Court construed the corresponding structure for supplying air for primary combustion as 1) a U-shaped channel that is affixed centrally to the bottom wall and the back or rear wall, and 2) a back wall opening. The Court construed the corresponding structure for supplying air for secondary combustion as 1) a bottom channel affixed to both the front and bottom walls, connected to side channels mounted in the front corners between the front wall and the side walls, connected to a distributor, 2) apertures formed in the back wall immediately below the baffle, and 3) an air injection manifold, which can be either a single horizontal piece or a horizontal T-shaped piece, that is mounted below the baffle and forward of the apertures and is attached to air supply conduits.

Travis focuses on the two requisite back wall openings and argues that its accused products do not infringe this means-plus-function limitation either literally or under the doctrine of equivalents because its accused products do not have these two back wall openings. Travis asserts that, except for the Endeavor and Revere, none of the accused products have any back wall openings. The Endeavor and Revere have only one back wall opening, which is in the upper portion of the rear wall under the baffle and which supports secondary combustion. Thus, the Endeavor and Revere do not have the requisite back wall opening to support primary combustion.

that the accused products have air inlets immediately below the baffle to support secondary

Hearth counters that the accused products have inlets in the front wall that are insubstantially

different from the rear wall inlets because both support primary combustion.<sup>5</sup> Hearth further argues

combustion, which are insubstantially different from the rear wall apertures that support secondary

performs the same function as the rear wall apertures, which is to provide air into the forward exhaust

path. In addition, the Endeavor and Revere have rear wall inlets near the baffle to support secondary

combustion. According to Hearth, all of the accused products have a tube at the back wall that

combustion.

Hearth's argument regarding the air inlets to support primary combustion fails for the same reasons discussed in conjunction with claim 1. A front wall opening is not substantially equivalent to a back wall opening. In claim 20, the back wall opening delivers air through the back wall. This is an air supply for primary combustion that is in addition to the front wall opening to supply air for primary combustion. In the accused products, the only air supply to support primary combustion is the front wall opening. There is no additional back wall opening. While the result of having one front wall opening may be the same at the most general level as having a front wall opening and a back wall opening since the fuel is burned by air entering through the air supplies, this is overly simplistic. The claimed means of supplying air includes a back wall opening. No reasonable jury could find that one air supply is insubstantially different from two air supplies. Absent a back wall air supply to support primary combustion, the accused products do not infringe claim 20 literally or under the doctrine of equivalents.

<u>C. Claim 21</u>

<sup>&</sup>lt;sup>5</sup> Hearth also argues that the accused products have a U-shaped channel, which is one of the corresponding structures for primary combustion. This argument is a red herring because Travis does not argue that its products do not have similar U-shaped channels. The relevant issue is whether the accused products have the back wall opening to support primary combustion.

In its claim construction order, the Court made clear that it construed "combustion air supply means for supplying combustion air to the fuel combustion chamber below the heat absorbing means" only as it appeared in claim 20, and that its construction did not apply to that term as it appeared in claim 21. (Order on claim construction at 28-29). Therefore, the analysis above applies only to claim 20, not to claim 21. In light of the Court's holding in Section I that the accused products do not infringe the baffle limitation in claim 21 and because the parties have not briefed the proper construction of this term as it appears in claim 21, the Court declines to construe this term as it appears in claim 21 and determine if there are disputed facts as to infringement.

# III. Three Separate Supplies of Secondary Air

Travis maintains that their Revere and Endeavor stoves do not infringe claim 21. (Hearth asserts that these two products are the only ones that infringe claim 21.) Claim 21 describes a stove that has one primary combustion air supply and three "secondary combustion air supplies" that are "separate" from each other. (The '876 patent, 10:62-11:3). Travis argues that the Revere and Endeavor stoves do not infringe claim 21 since each secondary air supply in these stoves contains a mixture of primary and secondary air, and therefore there are not three "separate" "secondary air supplies." Travis' argument assumes that the separate air supplies in claim 21 each represent a distinct supply of air. Hearth disagrees with this definition and insists that a separate air supply is simply a distinct opening for air to come through.

To address Travis' argument, the Court would have to construe the means-plus-function claim term, specifically the meaning of "separate secondary combustion air supply." Given the minimal briefing on this issue and the Court's holding in Section I that the accused products do not infringe the baffle limitation in claim 21, the Court need not address this particular argument.

### **CONCLUSION**

The Court GRANTS Travis' motion. The baffle configuration in Travis' accused products do not infringe the baffle limitation in independent claims 1, 20, and 21 of the '876 patent literally or ORDER - 13

	Case 2:03-cv-02526-MJP Document 250 Filed 04/12/05 Page 14 of 14
1	under the doctrine of equivalents. Similarly, Travis' accused products do not infringe the rear wall air
2	supply requirements in claims 1 and 20.
3	The clerk is directed to provide copies of this order to all counsel of record.
4	Dated: April 12, 2005
5	
6	<u>/s/ Marsha J. Pechman</u> Marsha J. Pechman
7	United States District Judge
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	

ORDER - 14